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**UNIVERSITY OF TORONTO**

**DIVISION OF UNIVERSITY EXTENSION**

DEPARTMENT OF BUSINESS, ENGINEERING, NURSING AND SPECIAL PROGRAMMES
84 QUEEN'S PARK, TORONTO 5, ONTARIO

P78 0055
·(47)

# DYNAMIC BEHAVIOUR OF BEAMS AND FRAMES

This course is designed to familiarize the practising structural engineer with the analysis of beams and frames subjected to dynamic loadings such as those produced by earthquakes, shock and machinery.

The basic concepts will be presented through a study of the one-degree-of-freedom lumped mass system and simple distributed mass problems such as single span beams. These fundamental ideas will then be used to develop analysis techniques for plane frames and beams. Considerable time will be devoted to such topics as natural frequency, mode shapes, response spectra and the effect of various forcing functions.

Basic mathematical tools such as differential equations, matrix operation and the determination of eigen-values will be presented as required.

PREREQUISITE: Applicants are expected to have an engineering degree, or equivalent.

LECTURER: P.M. Wright.

TEXT: J. M. Biggs, *Introduction to Structural Dynamics*, McGraw-Hill, 1964

TIME: Tuesdays, 7:30 – 9:30 p.m., commencing October 7

PLACE: 316, Galbraith Building, St. George Campus

FEE: $75.00 – 15 sessions

COURSE ..............................

Mr.
Mrs. .............................. Name (Please print)
Miss

Address .............................. Number & Street .............................. City .............................. Province

Company ..............................

Position ..............................

Business Address ..............................

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